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* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
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NEWS 3 FEB 27 New STN AnaVist pricing effective March 1, 2006
NEWS 4 APR 04 STN AnaVist \$500 visualization usage credit offered
NEWS 5 MAY 10 CA/CAPLUS enhanced with 1900-1906 U.S. patent records
NEWS 6 MAY 11 KOREAPAT updates resume
NEWS 7 MAY 19 Derwent World Patents Index to be reloaded and enhanced
NEWS 8 MAY 30 IPC 8 Rolled-up Core codes added to CA/CAPLUS and
USPATFULL/USPAT2
NEWS 9 MAY 30 The F-Term thesaurus is now available in CA/CAPLUS
NEWS 10 JUN 02 The first reclassification of IPC codes now complete in
INPADOC
NEWS 11 JUN 26 TULSA/TULSA2 reloaded and enhanced with new search and
and display fields

NEWS EXPRESS FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.
V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
<http://download.cas.org/express/v8.0-Discover/>

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NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8
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Enter NEWS followed by the item number or name to see news on that
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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 08:51:58 ON 27 JUN 2006

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 08:52:10 ON 27 JUN 2006

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STRUCTURE FILE UPDATES: 26 JUN 2006 HIGHEST RN 889573-50-6
DICTIONARY FILE UPDATES: 26 JUN 2006 HIGHEST RN 889573-50-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

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*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
*****
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

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      2 KAKAGAGSATLSMAYAGARFVFSLV DAMNGKEGVVECSFVKSQETECTYFSTPLLLGKKGIEKN
      LGIGKVSS/SQEP
28992 SQL=72
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      LGIGKVSS/SQEP
      (KAKAGAGSATLSMAYAGARFVFSLV DAMNGKEGVVECSFVKSQETECTYFSTPLLLGKKGI
      EKNLGIGKVSS/SQEP AND SQL=72)

=> s KAKAGAGSATLSMAYAGARFVFSLV DAMNGKEGVVECSFVKSQETECTYFSTPLLLGKKGIEKNLGIGKVSS/SQSP
L2      23 KAKAGAGSATLSMAYAGARFVFSLV DAMNGKEGVVECSFVKSQETECTYFSTPLLLGKKGIEKN
      LGIGKVSS/SQSP
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=> file caplus
COST IN U.S. DOLLARS          SINCE FILE          TOTAL
                               ENTRY          SESSION
FULL ESTIMATED COST          36.38          36.59
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FILE 'CAPLUS' ENTERED AT 08:53:05 ON 27 JUN 2006
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FILE COVERS 1907 - 27 Jun 2006 VOL 145 ISS 1
FILE LAST UPDATED: 26 Jun 2006 (20060626/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s l1 or l2

2 L1

18 L2

L3 18 L1 OR L2

=> s l3 not py>2002

4004323 PY>2002

L4 2 L3 NOT PY>2002

=> d ibib 1-2

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:18945 CAPLUS

DOCUMENT NUMBER: 138:67676

TITLE: Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences

AUTHOR(S): Strausberg, Robert L.; Feingold, Elise A.; Grouse, Lynette H.; Derge, Jeffery G.; Klausner, Richard D.; Collins, Francis S.; Wagner, Lukas; Shenmen, Carolyn M.; Schuler, Gregory D.; Altschul, Stephen F.; Zeeberg, Barry; Buetow, Kenneth H.; Schaefer, Carl F.; Bhat, Narayan K.; Hopkins, Ralph F.; Jordan, Heather; Moore, Troy; Max, Steve I.; Wang, Jun; Hsieh, Florence; Diatchenko, Luda; Marusina, Kate; Farmer, Andrew A.; Rubin, Gerald M.; Hong, Ling; Stapleton, Mark; Soares, M. Bento; Bonaldo, Maria F.; Casavant, Tom L.; Scheetz, Todd E.; Brownstein, Michael J.; Usdin, Ted B.; Toshiyuki, Shiraki; Carninci, Piero; Prange, Christa; Raha, Sam S.; Loquellano, Naomi A.; Peters, Garrick J.; Abramson, Rick D.; Mullahy, Sara J.; Bosak, Stephanie A.; McEwan, Paul J.; McKernan, Kevin J.; Malek, Joel A.; Gunaratne, Preethi H.; Richards, Stephen; Worley, Kim C.; Hale, Sarah; Garcia, Angela M.; Gay, Laura J.; Hulyk, Stephen W.; Villalon, Debbie K.; Muzny, Donna M.; Sodergren, Erica J.; Lu, Xiuhua; Gibbs, Richard A.; Fahey, Jessica; Helton, Erin; Kettelman, Mark; Madan, Anuradha; Rodrigues, Stephanie; Sanchez, Amy; Whiting, Michelle; Madan, Anup; Young, Alice C.; Shevchenko, Yuriy; Bouffard, Gerard G.; Blakesley, Robert W.; Touchman, Jeffrey W.; Green, Eric D.; Dickson, Mark C.; Rodriguez, Alex C.; Grimwood, Jane; Schmutz, Jeremy; Myers, Richard M.; Butterfield, Yaron S. N.; Krzywinski, Martin I.; Skalska, Ursula; Smailus, Duane E.; Schnerch, Angelique; Schein, Jacqueline E.; Jones, Steven J. M.; Marra, Marco A.

CORPORATE SOURCE: National Cancer Institute, NIH, Bethesda, MD, 20892-2580, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2002), 99(26), 16899-16903
CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:592185 CAPLUS
DOCUMENT NUMBER: 135:177271
TITLE: Cloning, sequencing and therapeutic use of human
mitochondrial malate dehydrogenase
INVENTOR(S): Bandman, Olga; Corley, Neil C.; Shah, Purvi
PATENT ASSIGNEE(S): Incyte Genomics, Inc., USA
SOURCE: U.S., 34 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6274138	B1	20010814	US 1997-922957	19970903
US 2002086006	A1	20020704	US 2001-915694	20010725
PRIORITY APPLN. INFO.:			US 1997-922957	A3 19970903
REFERENCE COUNT:	15	THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT		

=> d his

(FILE 'HOME' ENTERED AT 08:51:58 ON 27 JUN 2006)

FILE 'REGISTRY' ENTERED AT 08:52:10 ON 27 JUN 2006

L1 2 S KAKAGAGSATLSMAYAGARFVFSLV DAMNGKEGVVECSFVKSQETECTYFSTPLLLGKKGI
L2 23 S KAKAGAGSATLSMAYAGARFVFSLV DAMNGKEGVVECSFVKSQETECTYFSTPLLLGKKGI

FILE 'CAPLUS' ENTERED AT 08:53:05 ON 27 JUN 2006

L3 18 S L1 OR L2
L4 2 S L3 NOT PY>2002

=> s l1

L5 2 L1

=> d ibib 1-2

L5 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:681680 CAPLUS
DOCUMENT NUMBER: 141:200162
TITLE: Mitochondrial malate dehydrogenase DNA fragmentation
activator fragment and related conjugated proteins and
antibodies for cancer therapy
INVENTOR(S): Wright, Susan C.; Larrick, James W.; Nock, Steffen R.;
Wilson, David S.
PATENT ASSIGNEE(S): Palo Alto Institute of Molecular Medicine, USA
SOURCE: PCT Int. Appl., 225 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004070012	A2	20040819	WO 2004-US2974	20040202
WO 2004070012	A3	20060330		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

AU 2004209644 A1 20040819 AU 2004-209644 20040202
CA 2514841 AA 20040819 CA 2004-2514841 20040202
US 2004191843 A1 20040930 US 2004-770668 20040202
EP 1590440 A2 20051102 EP 2004-707424 20040202

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

PRIORITY APPLN. INFO.: US 2003-444191P P 20030203
US 2003-460855P P 20030408
US 2004-770668 A 20040202
WO 2004-US2974 W 20040202

L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:681539 CAPLUS
DOCUMENT NUMBER: 141:212819
TITLE: Compounds useful in coating stents to prevent and treat stenosis and restenosis
INVENTOR(S): Wang, Yuqiang; Larrick, James W.; Wright, Susan C.
PATENT ASSIGNEE(S): Medlogics Device Corporation, USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004069201	A2	20040819	WO 2004-US3143	20040203
WO 2004069201	A3	20050519		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-444391P P 20030203
OTHER SOURCE(S): MARPAT 141:212819

=> d abs 2

L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN

AB At least one bioactive agent is locally delivered to a location where a stent is implanted within a lumen in a patient's body. The bioactive agent includes DNA minor groove binder (such as CC-1065 or Duocarmycin); apocynin; RGD peptide (such as RGDfV); stilbene compound (such as resveratrol); camptothecin; des-aspartate angiotensin I; or ADF; or an analog or derivative thereof; or a combination or blend thereof with at least one other bioactive agent. The bioactive agent is generally locally delivered, such as by elution from the stent. The compds. and methods are of particular benefit for treating or preventing atherosclerosis, stenosis, restenosis, smooth muscle cell proliferation, occlusive disease,

or other abnormal luminal cellular proliferation condition.

=> s 12

L6 18 L2

=> s 16 not 15

L7 16 L6 NOT L5

=> s 17 not py>2003

2937472 PY>2003

L8 3 L7 NOT PY>2003

=> d ibib 1-3

L8 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:942764 CAPLUS

DOCUMENT NUMBER: 140:3792

TITLE: Genes expressed in atherosclerotic tissue and their use in diagnosis and pharmacogenetics

INVENTOR(S): Nevins, Joseph; West, Mike; Goldschmidt, Pascal

PATENT ASSIGNEE(S): Duke University, USA

SOURCE: PCT Int. Appl., 408 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003091391	A2	20031106	WO 2002-XA38221	20021112
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
WO 2003091391	A2	20031106	WO 2002-US38221	20021112
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRIORITY APPLN. INFO.:			US 2002-374547P	P 20020423
			US 2002-420784P	P 20021024
			US 2002-421043P	P 20021025
			US 2002-424680P	P 20021108
			WO 2002-US38221	A 20021112

L8 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:18945 CAPLUS

DOCUMENT NUMBER: 138:67676

TITLE: Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences

AUTHOR(S): Strausberg, Robert L.; Feingold, Elise A.; Grouse, Lynette H.; Derge, Jeffery G.; Klausner, Richard D.;

Collins, Francis S.; Wagner, Lukas; Shenmen, Carolyn M.; Schuler, Gregory D.; Altschul, Stephen F.; Zeeberg, Barry; Buetow, Kenneth H.; Schaefer, Carl F.; Bhat, Narayan K.; Hopkins, Ralph F.; Jordan, Heather; Moore, Troy; Max, Steve I.; Wang, Jun; Hsieh, Florence; Diatchenko, Luda; Marusina, Kate; Farmer, Andrew A.; Rubin, Gerald M.; Hong, Ling; Stapleton, Mark; Soares, M. Bento; Bonaldo, Maria F.; Casavant, Tom L.; Scheetz, Todd E.; Brownstein, Michael J.; Usdin, Ted B.; Toshiyuki, Shiraki; Carninci, Piero; Prange, Christa; Raha, Sam S.; Loquellano, Naomi A.; Peters, Garrick J.; Abramson, Rick D.; Mullahy, Sara J.; Bosak, Stephanie A.; McEwan, Paul J.; McKernan, Kevin J.; Malek, Joel A.; Gunaratne, Preethi H.; Richards, Stephen; Worley, Kim C.; Hale, Sarah; Garcia, Angela M.; Gay, Laura J.; Hulyk, Stephen W.; Villalon, Debbie K.; Muzny, Donna M.; Sodergren, Erica J.; Lu, Xiuhua; Gibbs, Richard A.; Fahey, Jessica; Helton, Erin; Kettelman, Mark; Madan, Anuradha; Rodrigues, Stephanie; Sanchez, Amy; Whiting, Michelle; Madan, Anup; Young, Alice C.; Shevchenko, Yuriy; Bouffard, Gerard G.; Blakesley, Robert W.; Touchman, Jeffrey W.; Green, Eric D.; Dickson, Mark C.; Rodriguez, Alex C.; Grimwood, Jane; Schmutz, Jeremy; Myers, Richard M.; Butterfield, Yaron S. N.; Krzywinski, Martin I.; Skalska, Ursula; Smailus, Duane E.; Schnerch, Angelique; Schein, Jacqueline E.; Jones, Steven J. M.; Marra, Marco A.

CORPORATE SOURCE: National Cancer Institute, NIH, Bethesda, MD, 20892-2580, USA
 SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2002), 99(26), 16899-16903
 CODEN: PNASA6; ISSN: 0027-8424
 PUBLISHER: National Academy of Sciences
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2001:592185 CAPLUS
 DOCUMENT NUMBER: 135:177271
 TITLE: Cloning, sequencing and therapeutic use of human mitochondrial malate dehydrogenase
 INVENTOR(S): Bandman, Olga; Corley, Neil C.; Shah, Purvi
 PATENT ASSIGNEE(S): Incyte Genomics, Inc., USA
 SOURCE: U.S., 34 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6274138	B1	20010814	US 1997-922957	19970903
US 2002086006	A1	20020704	US 2001-915694	20010725
PRIORITY APPLN. INFO.:			US 1997-922957	A3 19970903
REFERENCE COUNT:	15	THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT		

L8 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
 IT 480917-91-7 480917-95-1 480919-09-3 480919-29-7, CAGF28 (human)
 480919-95-7, Brachyury (human gene TBX1) 480919-98-0, Cbf5p (human cell
 line HeLa gene CBF5) 480919-99-1 480920-09-0, GenBank AAB94761
 480920-38-5, GenBank AAB96655 480920-71-6, Mad4 (human gene Mad4)
 480921-77-5, Complement component C2 (human gene C2) 480922-00-7,
 GenBank AAB99730 480922-06-3 480922-10-9, BC-2 protein (human)
 480922-11-0, Cyclophilin-33B (human gene CYP-33) 480922-49-4, Mucin
 (human gene MUC3) 480924-07-0 480924-12-7 480924-20-7,
 Transcription factor LZIP (human) 480924-63-8 480924-67-2
 480924-69-4, GenBank AAC05601 480924-79-6, SSX4 (human gene SSX4)
 480924-98-9 480926-14-5 480926-28-1 480926-38-3 480926-40-7
 480926-41-8 480926-42-9 480926-43-0 480927-06-8 480927-23-9
 480928-15-2, GenBank AAC15791 480928-16-3 480929-54-2 480929-55-3
 480929-66-6, Sorting nexin 2 (human gene SNX2) 480929-83-7 480929-92-8
 480931-06-4 480931-07-5 480931-08-6 480931-09-7 480931-79-1
 480932-16-9 480932-18-1 480932-19-2 480932-69-2, GenBank AAC26109
 480933-21-9 480933-35-5 480933-36-6 480933-45-7, PLE21 protein
 (human gene ple21) 480933-46-8 480933-64-0, GenBank AAC28644
 480934-15-4, Nucleoplasmin-3 (human gene NPM3) 480934-16-5,
 Lysophospholipase (human gene LPL1) 480934-44-9, Protein (human gene
 JH8) 480934-77-8, ATPase (human) 480934-93-8, GenBank AAC33132
 480935-42-0, GenBank AAC34245 480935-86-2 480935-99-7, DNA repair
 exonuclease (human gene REC1) 480936-36-5 480936-86-5, Cullin 1 (human
 cell line HeLa) 480936-95-6, Molecular chaperone DnaJ (human)
 480937-06-2, Protein (human gene NAP) 480937-27-7 480937-28-8
 480937-37-9, Phosphomevalonate kinase (human) 480937-40-4 480938-12-3
 480938-75-8, Kallistatin (human gene PI4) 480938-96-3 480938-99-6
 480939-09-1, GenBank AAC41749 480939-14-8 480940-77-0, GenBank
 AAC41930 480940-78-1, GenBank AAC41931 480940-88-3 480941-34-2
 480941-37-5 480941-39-7 480941-43-3 480941-52-4, Trio isoform
 (human) 480941-62-6 480941-63-7, P47 LBC oncogene (human clone 9a2)
 480941-65-9 480942-01-6, SLP-76 (human) 480942-04-9 480942-30-1
 480942-66-3 480942-70-9 480943-40-6 480943-41-7 480943-46-2
 480943-51-9, Protein RGP4 (human) 480943-57-5 480943-68-8
 480943-84-8 480944-02-3, Protein B (human cell line HT-1080)
 480944-09-0, Metaxin (human gene MTX) 480944-41-0, Hs-CUL-1 (human gene
 Hs-cul-1) 480944-46-5, BA46 (human) 480944-70-5 480944-71-6
 480945-09-3 480945-16-2 480945-17-3, DNA polymerase gamma (human)
 480945-22-0, STAM (human) 480945-23-1, LIM protein (human gene LPP)
 480946-18-7, FUSE binding protein 3 (human gene FBP3) 480946-29-0,
 GenBank AAC50955 480946-82-5 480947-84-0 480948-05-8, C2H2-150
 (human) 480948-26-3, Uncoupling protein 3, UCP3S (human) 480948-28-5,
 GenBank AAC51360 480948-30-9, Phosphomannomutase (human gene PMM2)
 480950-82-1, Zinc finger protein (human clone PRD51) 480951-45-9, Dead
 box, Y isoform (human gene DBY) 480951-46-0 480952-58-7 480953-12-6,
 G-protein coupled receptor RE2 (human) 480953-60-4, Protein UP50 (human
 urine) 480953-61-5, GenBank AAC62108 480953-69-3, GenBank AAC62428
 480953-76-2 480953-89-7 480954-43-6 480954-51-6 480954-63-0,
 Gamma2-adaptin (human gene G2AD) 480956-14-7, GenBank AAC70911
 480956-29-4 480956-30-7, GenBank AAC72105 480956-35-2 480958-09-6,
 Protein (human clone 559 125-amino acid) 480958-16-5, Protein (human
 clone 638 198-amino acid) 480958-17-6, GenBank AAC72956 480958-22-3,
 GenBank AAC72961 480958-31-4 480958-60-9, GenBank AAC79844
 480959-13-5 481118-85-8 481122-86-5, AML1c protein (human gene AML1)
 481122-88-7, AML1b protein (human gene AML1) 481123-11-9, VAMP5 (human)
 481123-58-4 481123-89-1 481125-18-2 481125-24-0, GenBank AAD00702
 481125-83-1, GenBank AAD01614 481126-46-9 481126-50-5, GenBank
 AAD02203 481126-60-7 481126-75-4, GenBank AAD03161 481126-84-5, AP-3
 complex sigma3A subunit (human) 481127-04-2 481128-89-6, GenBank
 AAA66020 481128-90-9 481129-26-4, GenBank BAA31588 481129-29-7
 481129-30-0 481129-37-7 481129-39-9 481129-47-9 481129-53-7
 481129-54-8 481129-60-6, GenBank BAA34787 481130-03-4 481131-07-1,
 Protein (human gene HRIHFB2157) 481131-19-5, Protein MD-1 (human)

481131-62-8 481131-82-2 481132-35-8 481132-38-1 481132-48-3
 481132-99-4 481133-00-0, Fln29 (human gene fln29) 481133-01-1, GenBank
 BAA78640 481133-20-4, DEPP (human gene DEPP) 481133-61-3 481133-62-4
 481133-70-4 481134-93-4 481134-94-5 481134-96-7 481135-07-3
 481135-94-8 481136-83-8 481137-03-5, GenBank BAA06626 481137-13-7
 481137-22-8 481137-23-9 481137-34-2, L-histidine decarboxylase (human)
 481137-54-6 481137-57-9 481138-12-9 481138-14-1 481138-46-9
 481138-47-0 481138-55-0 481138-69-6 481139-37-1 481139-85-9,
 GenBank BAA07508 481140-37-8 481140-39-0, GenBank AAA70417
 481140-83-4 481140-89-0, GenBank BAA05124 481140-98-1, 5'-Nucleotidase
 (human) 481140-99-2 481141-09-7 481141-11-1 481141-13-3
 481141-23-5 481141-28-0 481141-29-1 481141-52-0 481142-07-8,
 PK-120 precursor (human) 481143-01-5, Sky (human cell line HepG2 gene
 sky) 481143-06-0 481143-08-2 481143-10-6 481143-14-0 481143-35-5
 481143-50-4 481143-52-6 481143-57-1 481143-61-7 481143-87-7, Human
 rab GDI (human) 481144-86-9, Carbamyl phosphate synthetase I (human)
 481144-91-6 481144-97-2, LIMK-2 (human clone limk-2) 481145-06-6,
 Protein (human 349-amino acid) 481145-07-7 481145-28-2 481145-31-7,
 Protein (human 384-amino acid)
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
 (Biological study)
 (amino acid sequence; genes expressed in atherosclerotic tissue and
 their use in diagnosis and pharmacogenetics)

=> file pctfull
 COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
19.79	56.38

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-0.75	-0.75

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 MOST RECENT UPDATE WEEK: 200625 <200625/EW>
 FILE COVERS 1978 TO DATE

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<http://www.stn-international.de/stndatabases/details/ipc-reform.html> >>>

>>> FOR CHANGES IN PCTFULL PLEASE SEE HELP CHANGE
 (last updated April 10, 2006) <<<

>>> NEW PRICES IN PCTFULL AS OF 01 JULY 2006. FOR DETAILS,
 PLEASE SEE HELP COST <<<

=> s (mitochondrial malate) or MDH

10031 MITOCHONDRIAL
 1 MITOCHONDRIALS
 10031 MITOCHONDRIAL
 (MITOCHONDRIAL OR MITOCHONDRIALS)
 6890 MALATE
 368 MALATES
 7208 MALATE
 (MALATE OR MALATES)
 25 MITOCHONDRIAL MALATE
 (MITOCHONDRIAL (W) MALATE)

```

789 MDH
  9 MDHS
794 MDH
      (MDH OR MDHS)
L9      816 (MITOCHONDRIAL MALATE) OR MDH

=> s conjugat? or link?
      76223 CONJUGAT?
      303388 LINK?
L10     322330 CONJUGAT? OR LINK?

=> s l9 and l10
L11     713 L9 AND L10

=> s cancer? or tumor? or neoplas?
      79320 CANCER?
      66217 TUMOR?
      23005 NEOPLAS?
L12     98755 CANCER? OR TUMOR? OR NEOPLAS?

=> s l11 and l12
L13     548 L11 AND L12

=> s antibod?
L14     88922 ANTIBOD?

=> s l13 and l14
L15     523 L13 AND L14

=> s l15 not py>2002
      414028 PY>2002
L16     259 L15 NOT PY>2002

=> s l9/clm
      931 MITOCHONDRIAL/CLM
      695 MALATE/CLM
      2 MITOCHONDRIAL MALATE/CLM
        ((MITOCHONDRIAL (W)MALATE) /CLM)
      98 MDH/CLM
L17     100 ((MITOCHONDRIAL MALATE/CLM) OR MDH/CLM)

=> s k8/ab
L18     10 K8/AB

=> s l9/ab
      331 MITOCHONDRIAL/AB
      59 MALATE/AB
      1 MALATES/AB
      60 MALATE/AB
        ((MALATE OR MALATES) /AB)
      0 MITOCHONDRIAL MALATE/AB
        ((MITOCHONDRIAL (W)MALATE) /AB)
      8 MDH/AB
L19     8 ((MITOCHONDRIAL MALATE/AB) OR MDH/AB)

=> s l19 or l17
L20     101 L19 OR L17

=> s l20 and l16
L21     6 L20 AND L16

=> d ibib 1-21

```

ACCESSION NUMBER: 2001057277 PCTFULL ED 20020827
 TITLE (ENGLISH): HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES
 USEFUL FOR ANALYSIS OF GENE EXPRESSION IN HUMAN FETAL
 LIVER
 TITLE (FRENCH): SONDAS D'ACIDE NUCLEIQUE A UN SEUL EXON DERIVEES DU
 GENOME HUMAIN UTILES POUR ANALYSER L'EXPRESSION GENIQUE
 DANS LE FOIE FOETAL HUMAIN
 INVENTOR(S): PENN, Sharron, G.;
 HANZEL, David, K.;
 CHEN, Wensheng;
 RANK, David, R.
 PATENT ASSIGNEE(S): MOLECULAR DYNAMICS, INC.;
 PENN, Sharron, G.;
 HANZEL, David, K.;
 CHEN, Wensheng;
 RANK, David, R.
 DOCUMENT TYPE: Patent
 PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2001057277	A2	20010809

DESIGNATED STATES
 W:

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU
 CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN
 IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK
 MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
 TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW MZ SD
 SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY
 DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF
 CG CI CM GA GN GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2001-US669 A 20010130
 PRIORITY INFO.: US 2000-60/180,312 20000204
 US 2000-60/207,456 20000526
 US 2000-09/608,408 20000630
 US 2000-09/632,366 20000803
 US 2000-60/234,687 20000921
 US 2000-60/236,359 20000927
 GB 2000-0024263.6 20001004

L21 ANSWER 2 OF 6 PCTFULL COPYRIGHT 2006 Univentio on STN
 ACCESSION NUMBER: 2001048227 PCTFULL ED 20020827
 TITLE (ENGLISH): METHOD FOR PRODUCTION OF PROTEINS IN HOST CELLS
 INVOLVING THE USE OF CHAPERONINS
 TITLE (FRENCH): METHODES DE PRODUCTION DE PROTEINES DANS DES CELLULES
 HOTES
 INVENTOR(S): JOACHIMIAK, Andrzej;
 DONELLY, Mark
 PATENT ASSIGNEE(S): GENENCOR INTERNATIONAL, INC.
 DOCUMENT TYPE: Patent
 PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2001048227	A1	20010705

DESIGNATED STATES
 W:

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU
 CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN
 IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK
 MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
 TR TT TZ UA UG UZ VN YU ZA ZW GH GM KE LS MW MZ SD SL
 SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE
 DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG
 CI CM GA GN GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2000-US34055 A 20001214
 PRIORITY INFO.: US 1999-09/470,830 19991223

L21 ANSWER 3 OF 6 PCTFULL COPYRIGHT 2006 Univentio on STN
 ACCESSION NUMBER: 2000071723 PCTFULL ED 20020515
 TITLE (ENGLISH): METHODS FOR REGULATING PROTEIN CONFORMATION USING
 MOLECULAR CHAPERONES
 TITLE (FRENCH): METHODES DE REGULATION DE LA CONFORMATION DE PROTEINES
 AU MOYEN DE CHAPERONS MOLECULAIRES
 INVENTOR(S): BUKAU, Bernd;
 GOLOUBINOFF, Pierre
 PATENT ASSIGNEE(S): ROCHE DIAGNOSTICS GMBH;
 BUKAU, Bernd;
 GOLOUBINOFF, Pierre
 LANGUAGE OF PUBL.: English
 DOCUMENT TYPE: Patent
 PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2000071723	A2	20001130

DESIGNATED STATES
 W:

AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE
 DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE
 KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX
 NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA
 UG US UZ VN YU ZA ZW GH GM KE LS MW MZ SD SL SZ TZ UG
 ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI
 FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN
 GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2000-EP4501 A 20000518
 PRIORITY INFO.: US 1999-60/135,395 19990521
 EP 2000-00109270.9 20000428

L21 ANSWER 4 OF 6 PCTFULL COPYRIGHT 2006 Univentio on STN
 ACCESSION NUMBER: 2000058352 PCTFULL ED 20020515
 TITLE (ENGLISH): BARLEY GENE FOR THIOREDOXIN AND NADP-THIOREDOXIN
 REDUCTASE
 TITLE (FRENCH): GENE D'ORGE POUR REDUCTASE DE THIOREDOXINE ET DE
 THIOREDOXINE NADP
 INVENTOR(S): CHO, Myeong-Je;
 DEL VAL, Greg;
 CAILLAU, Maxime;
 LEMAUX, Peggy, G.;
 BUCHANAN, Bob, B.
 PATENT ASSIGNEE(S): THE REGENTS OF THE UNIVERSITY OF CALIFORNIA;
 CHO, Myeong-Je;
 DEL VAL, Greg;
 CAILLAU, Maxime;
 LEMAUX, Peggy, G.;
 BUCHANAN, Bob, B.
 LANGUAGE OF PUBL.: English
 DOCUMENT TYPE: Patent
 PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2000058352	A2	20001005

DESIGNATED STATES
 W:

AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ
 DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS
 JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN
 MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
 TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ
 UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES
 FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA
 GN GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2000-US8566 A 20000331

PRIORITY INFO.: US 1999-60/127,198 19990331
 US 1999-60/169,162 19991206
 US 2000-60/177,740 20000121
 US 2000-60/177,739 20000121

L21 ANSWER 5 OF 6 PCTFULL COPYRIGHT 2006 Univentio on STN
 ACCESSION NUMBER: 2000034484 PCTFULL ED 20020515
 TITLE (ENGLISH): POLYMORPHIC LOCI THAT DIFFERENTIATE ESCHERICHIA COLI
 0157:H7 FROM OTHER STRAINS
 TITLE (FRENCH): LOCI POLYMORPHES PERMETTANT DE DISTINGUER ESCHERICHIA
 COLI 0157:H7 D'AUTRES SOUCHES
 INVENTOR(S): TARR, Phillip, I.
 PATENT ASSIGNEE(S): CHILDREN'S HOSPITAL AND REGIONAL MEDICAL CENTER;
 TARR, Phillip, I.
 LANGUAGE OF PUBL.: English
 DOCUMENT TYPE: Patent
 PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2000034484	A1	20000615

DESIGNATED STATES
 W:

AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE
 DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE
 KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX
 NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA
 UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW
 AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR
 GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW
 ML MR NE SN TD TG

APPLICATION INFO.: WO 1999-US29149 A 19991208
 PRIORITY INFO.: US 1998-60/111,493 19981208

L21 ANSWER 6 OF 6 PCTFULL COPYRIGHT 2006 Univentio on STN
 ACCESSION NUMBER: 1999025739 PCTFULL ED 20020515
 TITLE (ENGLISH): VARIABLE REGION FUSION PEPTIDES THAT FORM EFFECTOR
 COMPLEXES IN THE PRESENCE OF ANTIGEN
 TITLE (FRENCH): PEPTIDES DE FUSION DE REGION VARIABLE QUI FORMENT DES
 COMPLEXES EFFECTEURS EN PRESENCE D'ANTIGENES
 INVENTOR(S): MAHONEY, Walt;
 WINTER, Greg
 PATENT ASSIGNEE(S): BOEHRINGER MANNHEIM CORPORATION;
 MAHONEY, Walt;
 WINTER, Greg
 LANGUAGE OF PUBL.: English
 DOCUMENT TYPE: Patent
 PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9925739	A1	19990527

DESIGNATED STATES
 W:

CA JP US AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC
 NL PT SE

APPLICATION INFO.: WO 1998-US20017 A 19980924
 PRIORITY INFO.: US 1997-60/065,719 19971114

=> d kwic 6

L21 ANSWER 6 OF 6 PCTFULL COPYRIGHT 2006 Univentio on STN
 ABEN The fusion polypeptides of this invention contain a variable region
 sequence linked to an
 effector sequence. The polypeptides do not form stable complexes in
 solution, except in the presence
 of an antigen.. . .

BACKGROUND

Antibody molecules have been designed by evolution to direct a relatively non-specific effector function on to a specific target. The antibody repertory of an individual can be primed against a limitless variety of foreign antigens. Upon revisitation of a previously encountered antigen, the induced antibody will bind and bring into play elements of the complement cascade, or Fc receptor bearing cells with all their capabilities.

The contemporary biomolecular chemist has capitalized on the targeting specificity of the

antibody for diagnostic and therapeutic purposes. Attaching the antibody with a label permits the detection or quantitation of antigen in a test solution. Attaching the antibody to a drug permits targeting to certain cells or tissues. New ways of delivering an effector function by way of an antibody are clearly of benefit.

Immunoassays used in routine clinical measurement involve an antibody specific for an analyte of interest in a biological sample. In separation based assays, the detecting of the complex involves a process wherein the complex formed is physically separated from either unreacted analyte, unreacted antibody, or both (U.S. Patent No. 3,646,346). The complex can be first formed in the fluid phase, and then subsequently captured by.

(U.S. Patent No. 4,708,929). Two subunits of the enzyme P-galactosidase associate to provide the detectable signal, which is quantitatively affected by analyte-specific antibody except in the presence of a sample containing free analyte.

Recent advances in antibody engineering have produced various artificially engineered

antibodies and chimeras. Many of these molecules are superior to the natural antibody in aspects such as stability, size, low production cost, higher affinity, or have additional functions such as bi-specificity.

The isolated heavy and light chain variable domains (VH and VL) of an antibody constitute a heterodimer known as the Fv fragment, which contains a single antigen binding pocket. Fv fragments may dissociate at low protein. . . . association between VH and VL did not depend on antigen specificity, and some variable domains associated better with a counterpart from another antibody molecule.

Isolated Fv fragments are expected to have better properties for penetration of solid tumor tissue, lower antigenicity, and improved pharmacokinetics. To prevent dissociation of the VH and VL, a single chain variable region (scFv) can be constructed in which the two variable domains are part of the same polypeptide chain, interconnected by a peptide

linker (Tsumoto et al.). A comparison of strategies to stabilize immunoglobulin Fv fragments has been described by Glockshuber et al.

Various other constructs of antibody molecules have been prepared. Monoclonal antibodies of a non-human species can be humanized by placing the three antigen-binding CDR regions of each VH and VL of the specific antibody into the framework of human VH and VL- See, for example, EP 0329400.

Constructs have also been prepared in which antibody binding sites are part of a molecular chimera. Maeda et al. proposed preparing a chimeric molecule in which an antibody binding monodomain was bioengineered onto Vargula luciferase. Ueda et al. (1992) constructed artificial chimeric cell-surface receptors, combining murine IgM with the cytoplasmic. . . constitutive and independent of antigen binding. With IgM lacking the CH2 domain, autophosphorylation increased with increasing concentrations of hapten-

- 2 -

BSA conjugate. Monovalent hapten could not induce phosphorylation, but inhibited stimulation by the conjugate.

0

SUMMARY OF THE INVENTION

The fusion polypeptides of this invention contain a variable region sequence linked to an effector sequence. The polypeptides do not form stable complexes in solution, except in the presence of an antigen for which. . .

. . . with each other in the presence of an antigen, consisting of a first fusion polypeptide comprising a first variable domain sequence linked to a first effector sequence, and a second fusion polypeptide comprising a second variable domain sequence

linked to a second effector sequence, wherein complexing between the first and second variable domain sequences in a solution is stabilized if. . .

. . . each other in a solution containing the antigen; c) preparing a first fusion polypeptide in which the first variable domain sequence is linked to the first effector sequence, and a second fusion polypeptide in which the second variable domain sequence is linked to a second effector sequence; and d) confirming that 1 0 the first fusion polypeptide forms a complex with the second. . .

. . . the combined variable region is specific for the model antigen hen egg lysozyme, and the effector sequences are monomer subunits of mitochondrial malate dehydrogenase.

FIG. 7 is a half-tone reproduction of a gel showing the size of the cloned encoding region for mitochondrial malate dehydrogenase.

0 a covalent linkage between the variable domain sequence and

the effector sequence,
which can be a peptide bond, a polypeptide linker sequence, or
any other type of
chemical structure covalently connecting the variable domain and the
effector in a
manner that permits the. . .

which is in the complexed
configuration. The two solid lines show VH and VL domains (left and
right) of a monoclonal antibody
specific for the antigen hen egg lysozyme. In the presence of the
antigen, the domains associate
along an interface of opposing P-pleated. . .

New York, 1996; and in Chemistry of Protein Conjugation and
Cross-linking by S.S. Wong, CRC
Press, 1993.

with the specificity for a particular antigen is standard
practice in the art. General techniques used in raising, purifying and
modifying antibodies, and the
design and execution of immunoassays, are found in Handbook of
Experimental Immunology (D.M.

Freund's complete adjuvant for the first administration, and Freund's
incomplete adjuvant for booster doses. The most common way to produce
monoclonal antibodies is
to immortalize and clone a splenocyte or other antibody
-producing cell recovered from an animal
that has been immunized. The clone is immortalized by a procedure such
as fusion with a. . .

The treated cells are cloned and cultured, and clones are selected that
produce antibody of the
desired specificity. Specificity testing is performed on clone
supernatants usually by immunoassay.

Other methods for obtaining specific variable regions from
antibodies or T cells involve
contacting a library of immunocompetent cells or viral particles with
the target antigen, and growing
out positively selected. . .

interacting variable regions. The most usual
configuration of the fusion peptides is for the C-terminus of each
variable region to be linked to the
N-terminus of each effector, although other configurations are possible.
It is also possible to trim a
few residues from the. . .

The opposite approach - that is, adding a linker sequence
between the variable sequence and the
effector sequence on one or both chains - becomes increasingly more
difficult with increasing
length of the linker. Precedents for conformational shifts
through a connector between neighboring
domains certainly exists, however, most notably represented by the
immunoglobulins themselves.

Where a linker is necessary, it is appropriate to begin with
candidates that form a rigid bridge, such
as a sequence predicted to form. . .

expressing a recombinant polynucleotide encoding it, either by PCR-type

amplification

5 or using a suitable expression vector, but polypeptide synthesis or conjugation of separate polypeptides using a cross-linking agent can also be used. The fusion proteins of this invention are designed to be freely soluble in solution, and are. . .

When adapted for use as biopharmaceuticals for human therapy, the variable region sequences, the effector sequences, and the linker sequences (if used) will typically be chosen to resemble human sequences as much as possible, to avoid immunogenicity. The specificity of. . .

. . . converted into a prodrug according to the strategy outlined in USSN 60/[pending; attorney docket 33746-3001 1.00]. The strategy involves using a cross-linking agent to form the prodrug into an inactive loop configuration. The loop contains either a protease recognition sequence in the amino acid sequence, or else an enzyme cleavable group within the cross-linker. Examples of 0 enzyme cleavable cross-linkers are outlined in USSN 08/883,632, and include those that are cleavable by glycosidase, phosphatase, amidase or esterase. The combined effector sequences. . . of the polypeptide pair mediating the prodrug activation would have the corresponding catabolic activity for either the peptide recognition sequence or the cross-linker

. . . and simplified using the polypeptide pairs of this invention. In one example, a plastic surface is coated with an antigen-specific capture antibody, the surface is contacted with the sample, and then the surface is contacted with the polypeptide pair. Presence of antigen in. . .

. . . Antigen-dependent association of V, and H
This example describes binding experiments conducted using variable region sequences from anti-hen egg lysozyme (anti-HEL) monoclonal antibody with the designation HyHEL The Fv fragment was previously known to form a trimolecular complex of 39 kDa in size, as. . .

. . . lysine residue (Lys 47) located at the VH. interface mutated to threonine, was made to exclude possible fragment association. The monoclonal antibody (Mab) with this mutation (VLK49T), which is analogous to HyHEL-8 VL, retains antigen binding affinity (Lavoie et al.). The mutant VL. . .

. . . Chem. 69, 28777-28782, 1994)
which encodes pel B signal peptide sequence upstream of the structural genes Of VH and VL of the antibody HyHEL-10 which is specific to HEL, the 670 bp portion thereof encoding the pelB, VL and ssi transcription termination sequence were. . .

. . . mixture was incubated at 37°C for one hour. After further two times of washing, 100 μ l of 1/5000 diluted peroxidase-labeled anti-MI3 antibody (Pharmacia) in binding

buffer was added. The plate was washed five times after one hour at 37°C, and then the sample. . .

Using the structural genes of VH- and W-domain of the antibody HyHEL-10 and the vector plasmid pKTN2, and also using the known procedure, Fv fragments of the HyHEL-10 were prepared.

with a malate dehydrogenase effector

In this example, a pair of fusion polypeptides is obtained that have enzymatic effector sequences based on mitochondrial malate dehydrogenase.

sequences, and X-ray crystallographic data available from the Brookhaven database. The sequences of the heavy and light chain variable regions of monoclonal antibody HyHEL-10 was imposed on the crystal structure of the intact Fv fragment. Various candidate enzymes with homologous or heterologous - 22. . .

likely to

be tested in a standard clinical assay. It is a proven label in other clinical chemistry technologies, and is stable. Mitochondrial malate dehydrogenase is allosterically regulated. Moreover, the 23 -

mechanism of catalysis is understood, which should facilitate adaptation to other substrates where desirable.

which is in the complexed configuration. The two solid lines show VH and VL

domains (left and right) of the anti-HEL antibody. In the presence of the antigen (hen egg lysozyme), the domains are predicted to associate in the manner shown. The malate. . .

FIG. 7 shows the successful amplification of the mitochondrial malate dehydrogenase (MDH) encoding region from a cDNA library. PCR primers were prepared that hybridize to flanking sequences in the cloning vector. Track 1 (no band): cDNA prepared with cytoplasmic MDH-specific primers, amplified with mitochondrial MDH specific primers. Track 2 (-1 kb band): cDNA prepared with cytoplasmic MDH-specific primers, amplified with cytoplasmic MDH specific primers. Track 3 (no band): cDNA prepared with mitochondrial MDH-specific primers, amplified with cytoplasmic MDH specific primers. Track 4 (-1 kb band): cDNA prepared with mitochondrial MDH-specific primers, amplified with mitochondrial MDH specific primers. Tracks 6-8 (no bands): controls. Track 9 (ladder): molecular weight standards.

amino acid sequence and nucleic

acid sequence of the light chain of HyHEL SEQ. ID NOS:11 and 12 provide the mouse MDH

amino acid sequence and nucleic acid sequence. SEQ. ID NOS:13 and 14 provide the pig MDH

amino acid sequence and nucleic acid sequence.

MDH variants are designed in which various amino acids at the MDH subunit interface are substituted so as to lessen the dimerization constant. The interface is readily identified from the structure shown in FIG.. . .

L 108 of the light chain or His 116 of the heavy chain are attached to the N-terminal of candidate modified MDH sequences. The expressed fusion polypeptides are tested for the criteria of antigen-driven but not substrate-driven association, and the antigen-dependent ability of the. . . of sequence alteration and testing is undertaken as necessary that adjust the amino acids at the effector subunit interface or the linkage between the variable domain sequences and the effector sequences to optimize the properties of the polypeptide pair.

- 24 -

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CLMEN. . . with each other in the presence of an antigen,
consisting of:

a) a first fusion polypeptide comprising a first variable domain
sequence linked to a
first effector sequence;
b) a second fusion polypeptide comprising a second variable domain
sequence linked
to a second effector sequence;
wherein presence of the antigen in a solution containing the fusion
polypeptides
promotes complexing between the first and. . .

preceding claim, wherein the first and second effector
sequences are each independently at least about 80% identical to the
monomer subunit of
mitochondrial malate dehydrogenase.

1 5 9. The pair of fusion polypeptides of any of claims 1 to 8, wherein
the first and second. . .

each other in a solution containing the antigen;

c) preparing a first fusion polypeptide in which the first variable
domain sequence is

linked to the first effector sequence, and a second fusion polypeptide in which the second variable domain sequence is linked to a second effector sequence; and
 d) confirming that the first fusion polypeptide forms a complex with the second fusion polypeptide that. . .

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L21 ANSWER 3 OF 6 PCTFULL COPYRIGHT 2006 Univentio on STN

DETD . . . acid sequence encoding polypeptide or protein can be prepared using well known methods. The expression vectors include a DNA sequence operably linked to suitable transcriptional or translational regulatory nucleotide sequences, such as those derived from a mammalian, microbial, viral, or insect gene. . . enhancers, an mRNA ribosomal binding site, and appropriate sequences which control transcription and translation initiation and termination. Nucleotide sequences are operably linked when the regulatory sequence functionally relates to the DNA sequence encoding the polypeptide or protein of interest.

For example, a promoter nucleotide sequence is operably linked to a DNA sequence encoding the protein or polypeptide of interest if the promoter nucleotide sequence controls the transcription of the. . .

. . . or a sense oligonucleotide, based upon a cDNA sequence for a given protein is described in, for example, Stein and Cohen, Cancer Res. 48:2659, 1988 and van der Krol et al., BioTechniques 6:958, 1988.

. . . of the polypeptides or proteins of the invention. Antisense or sense oligonucleotides further comprise oligonucleotides having modified sugar-phosphodiester backbones (or other sugar linkages, such as those described in WO91/06629) and wherein such sugar linkages are resistant to endogenous nucleases. Such oligonucleotides with resistant sugar linkages are stable *In vivo* (i. e., capable of resisting enzymatic degradation) but retain sequence specificity to be able to bind to target nucleotide sequences. Other examples of sense or antisense oligonucleotides include those oligonucleotides which are covalently linked to organic moieties, such as those described in W'O 90/10448, and other moieties that increases affinity of the oligonucleotide for. . .

Sense or antisense oligonucleotides also may be introduced into a cell containing the target nucleotide sequence by formation of a conjugate with a ligand binding molecule, as described in Alternatively, a sense or an antisense oligonucleotide may be introduced into a. . .

. . . can be treated in accordance with the invention include Creutzfeldt-jacob's disease,

Alzheimer's disease, Huntington's disease, Ataxia type-1, cystic fibrosis and cancer. The therapeutically effective dose is preferably delivered with a pharmaceutically acceptable carrier. More preferably, the pharmaceutically acceptable carrier is capable. . .

relationship was investigated by altering the cellular levels of chaperones individually or in combination and analyzing chaperone-substrate interactions by co-immunoprecipitation with chaperone-specific antibodies.

proteins that frequently occurs upon overproduction in bacteria. Furthermore, it was observed that aggregates of thermally denatured proteins (e.g., Malate Dehydrogenase, MDH) show increased staining with Congo red, a widely used marker stain indicative for amyloid fibers.

was conducted to analyze the ability of various chaperones to disaggregate

I and refold aggregates of thermosensitive test proteins (including Malate Dehydrogenase (MDH) Z) and firefly luciferase. Qualitatively similar results were obtained for all proteins tested, and the results for MDH are summarized in Figure 6 and Table 3, and described in more detail below.

Incubation of MDH at 47°C caused inactivation and formation of large aggregates, as judged by loss of its enzymatic activity, an increase in light. . . of aggregates. This is depicted in Figure 6A which shows the time-dependent inactivation and aggregation (increased turbidity at 550 nm) of mitochondrial

MDH (720 nM) at 47°C without chaperones and in the presence of DTT (10 mM). As shown in Table 3 and Figure 6A, neither ClpB nor the DnaK system alone, with or without ATP, was active in disaggregation and refolding of MDH. In contrast, as shown in Table 3 and Figure 6B (which shows the time-dependent disaggregation and reactivation at 25°C of MDH that had been aggregated by heat treatment as described above but supplemented with ClpB, DnaK, DnaJ and GrpE at concentrations of. . . of, ClpB and the DnaK system allowed complete solubilization within 30 min. and almost complete reactivation of up to 3 pM MDH within 3-4 hours.

Table 3: Disaggregation of aggregates of Malate Dehydrogenase (MDH) by chaperones

Time of addition Rate disag Refolding %

Yi

t=0 t=45 min.- (20 hrs)

BKJE 47 to 96

B KJE 61 t45 98

KJE B. . . of disaggregation were measured either at t0' (to) or at t45' (t45)- Un-

less indicated otherwise, the concentrations were as follows:

MDH.agg, 0.72 pM; ClpB, 0.5 pM,

DnaK, 1 pM; DnaJ, 0.2 pM, GrpE, 0.1 pM; GroEL, 4 pM; GroES, 4 pM; hspG, .

Example 8: Chaperone usage in the treatment of diseases linked to protein malfunction
Chaperones are useful in preventing and reversing the aggregation of proteins linked to

Z) Z)
amyloidoses and prion diseases. Several neuro-degenerative and age related diseases, such as the
Creutzfeld-jakob and Alzheimer diseases are caused bv. . .

22.4 SynechcystIS#I
100 24.5 12.2 Synechcystis#2
0.8 E. coli
00 H. plyorl

Example I 1: ClpS is established as a co-chaparone of CIPa
Malate dehydrogenase (MDH) (0.9 μ M) was aggregated, in the absence of chaperones, by incubation at 47°C for 30 minutes. With reference to Figure 14, following aggregation, MDH activity was monitored in the absence of chaperones (filled triangle), in the presence of 0.5 μ M CIPs (filled diamond), 0.5 μ M CIPa. . . 0.5 μ M CIPs (filled circle). As indicated in Figure 14, in the absence of chaperones or the presence of CIPs alone, MDH did not regain significant activity. In the presence of CIPa alone, up to 30% MDH activity was obtained after 300 minutes. When CIPa is supplemented with ClpS, both the rate and the yield of MDH activity was enhanced more than two-fold. Thus, CIPs is established as a potent co-chaperone of CIPa.

CLMEN. . . The method of claim 25 wherein the disease is Creutzfeld-Jacob's disease, Alzheimer's disease, Huntington's disease, Ataxia type- 1, cystic fibrosis or cancer.

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A.thaliana VLMKVIPGMTVDNAVNIMQEAHINGLAVVIVCAQADAEQHCMXCAVTA
G.max VLMKVIPGMTLDNAVNIMQEAHYNGLSVVIICDQADAE .....
Z.ma_ys VLMKVIPGMTVDNAVNIMQEAHVNGLSVVIVCSQSEAEHCTS..LRG-
Synechc_ystis#1 CLLKYIPGMTGDRWELTNQVHFDGLAIVWVGPPQEQAELYHQ..QLRR'
gynechc_ystis#2 TLIQTVAGMTQPQAVDIMMEAHFNGMSLVITCELEHAEFYCET..LRS
E.coli VLQKFFS.YDVERATQLMLAVHYQGKAICGVFTAETKVAMVNKYA
H.p_Vlori ALRDFFD.KSLEEAKALTSSIHRDGEVCGVYPYDIARHRAAWVRDKA
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Z.mays GC
Synechcystis#1 EKA
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E.coli KA
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---Logging off of STN---

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Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	21.10	77.48
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.75

STN INTERNATIONAL LOGOFF AT 09:09:44 ON 27 JUN 2006

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1642BJF

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

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